Union Switch & Signal Co.

SWISSVALE, PA.

Subject: Lens or Cover Glass Guard for Light Signals	Union Development
	Number: 209
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	Sheets

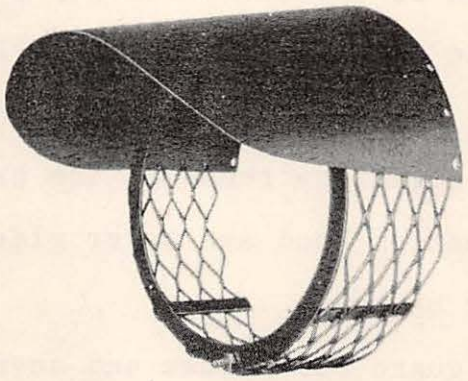

Fig. 1....Guard for Highway Crossing Color Light Signal with front screen removed.

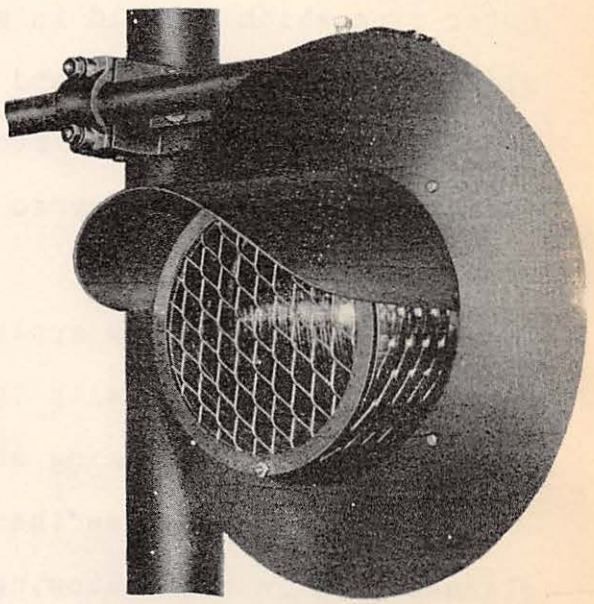

Fig. 2.....Guard applied to Highway Color Light Signal.

Reports that appreciable losses are resulting from malicious breaking of signal glass have brought about the design and manufacture of a substantial guard, readily applicable in front of the glass of color light and highway crossing signals.

In designing this guard we have selected a screen having a small enough mesh to ward off stones which would cause damage; but large enough to minimize the obstruction of the light beam. At the same time a screen material having considerable strength and rust resisting qualities has been chosen.

Figures 1 and 2 illustrate the mechanical structure of the guard used for Styles HC-5, HC-51, HC-7, HC-71 and HC-8 Highway Crossing Signals. It will be noted that the lens hood acts as the supporting member, the side screen being first spot welded to an inner sheet steel ring, and both of these pieces are then spot welded to the hood. The round front screen is spot welded to an outer ring which is held in at the top against the inner ring by a cleat welded to the hood and is secured in place at the bottom by a single bolt and nut. The front screen is therefore readily removable when it is necessary to clean the outside of the signal lens or cover glass.

The screen is applied to a signal by removing the existing hood and replacing it with the combination hood and cover glass guard. The same fastening screws may be used.

Figure 3 shows the type of guard for lenses and cover glasses used in the following color light signals; Styles R-2, RT-2, P-5, TP-5, H and H-2 Signals. It will be noted there is no side screen and that the guard is supported by screws and so spaced that the glass may be cleaned without removing the guard. Guards may readily be applied to signals in service as the longer screws are inserted in place of the existing screws used to fasten the lens or cover glass to the case. The holes in the back ring of guards are spaced so that the same guard may be mounted in front of any 8-3/8" lens or cover glass of the above mentioned signals. The 6-3/8" Style "N" lens guard is the same in general design, but smaller in size. Approximately 10 percent decrease in range is caused by the use of the guard.

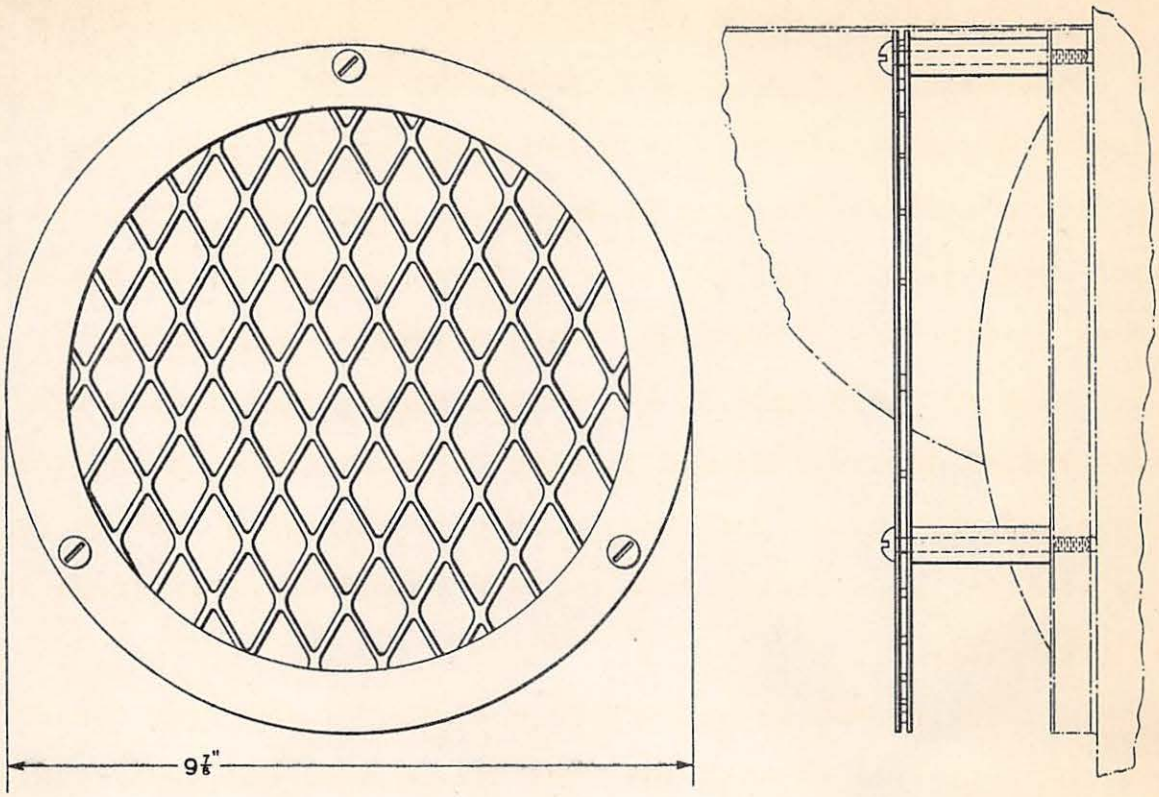

Fig. 3.....Guard for Styles P, R, H and H-2 Color Light Signals using no deflection prisms.

Ordering References:

Until permanent catalog references are available, orders for guards may be placed as follows:

Combined Cover Glass Guard and Hood Complete with front Screen for applying to HC-5, HC-51, HC-52, HC-7, HC-71, HC-72 and HC-8 Highway Crossing Signal Units.....Pce.189844

Guard Complete with Back Ring, Spacers and Screews for Styles P, R, H, H-2 Color Light Signals, without deflecting Prisms (also for other similar light units having same lens ring).....Pce.149816

Guard Complete with Back Ring, Spacers and Screws for Style P, R, H and H-2 Color Light Signals which are equipped with 9" diameter deflection prisms.....Pce.188389

W. H. Cadwallader 7/16/35